

In Memoriam

Frank Spencer (1941–1999), Historian of Physical Anthropology and Sleuth of Piltdown

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If there was one person, more than any other, who made it not only respectable but rewarding for an anthropologist to devote himself almost single-mindedly to the history of the discipline, it was surely Professor Frank Spencer. If there was one person who produced the most compelling evidence bearing on the identity of the person behind the infamous Piltdown hoax, then it was indeed Frank Spencer. His contributions to this branch of physical anthropology, including his most recent two-volume work, *History of*

Physical Anthropology: An Encyclopedia, have been of such moment that his death on May 30, 1999, at the young age of 58 has left the exponents of the science seriously bereft. His was the mental set that discerns what E.M. Forster might have had in mind when, in *A Passage to India*, he wrote, "Only connect!" Few scholars in anthropology have been better versed in the art and science of connecting than Spencer, whose probings of diary entries, past memories, letters, and seemingly casual visits, yielded to him vital clues to the mindset of the protagonists and the sequence of events in the chronicle of a discovery.

Frank Spencer died in New York City, the victim of a rare and exceptionally malignant form of cancer, a true histiocytic lymphoma. It was just 4 weeks after his 58th birthday and, clear-minded to the end, he had recently completed the first chapter of a planned new text on the history of physical anthropology. A modest, scholarly, bookish Englishman, Spencer held a chair of anthropology at Queens College, City University of New York.

He was born in the town of Chatham on the right bank of the river Medway in the English county of Kent, about 50 km east-southeast of London. Some 50 km to the south-southwest of his birthplace lies Piltdown. It was 6 months after his twelfth birthday that the proofs that the Piltdown mandible had been fraudulently altered were published by J.S. Weiner, K.P. Oakley, and W.E. LeGros Clark (in 1953). Later, Spencer is reported to have said that the revelation "didn't make a lasting impression on me." Spencer trained as a medical microbiologist, obtaining diplomas in clinical microbiology and clinical parasitology in London in 1964 and 1966. From 1964–1969 he worked in



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that capacity in the Department of Pathology at St. Bartholomew's Hospital, Rochester, Kent, before moving to Windsor, Ontario, Canada. There he pursued his first calling at the Hotel-Dieu Hospital and St. Clair College.

The lure of anthropology laid hold of him and he completed a BA (Honours in Anthropology) at the University of Windsor (Ontario). From 1973–1975, he was a Teaching Fellow in the well-known Department of Anthropology at the University of Michigan, during which time he completed an MA in biological anthropology. He returned to the University of Windsor as an adjunct lecturer in the Department of Sociology and Anthropology in 1976–1977. In 1979, he completed his PhD in biological anthropology at the University of Michigan and in the same year was appointed assistant professor in the Department of Anthropology of Queens College, City University of New York (CUNY). So began his 20 years of service to Queens, during which he rose through the ranks to become an Adjunct Professor in 1985 and a full Professor in 1987. Spencer was the chairman of the Anthropology Department from 1985–1994.

The seeds of his later concern with the authorship of the Piltdown hoax were sown when he devoted his doctoral dissertation to the life and work of the famed Czech-American, Aleš Hrdlička, who had been the first full-time, professional physical anthropologist in the USA. Hrdlička was a founder of the *American Journal of Physical Anthropology* and of the American Association of Physical Anthropologists. Professor C. Loring Brace of the University of Michigan Anthropology Department was the chairman of Spencer's doctoral committee and to whom Spencer was indebted "for his friendship, guidance, and unlimited enthusiasm." The other members of the doctoral committee were Professors Robert F. Berkhofer, Stanley M. Gatn, and Frank B. Livingstone.

Spencer's thesis, which was published by University Microfilms International in 1982, revealed that Hrdlička had long been interested in the Piltdown remains. During Hrdlička's visits to London in 1922, 1923, 1925, and 1927, he had tried to throw light on the circumstances surrounding the discov-

ery of the second Piltdown specimens. Hrdlička had been skeptical as to whether the first Piltdown cranium and mandible had belonged to the same individual. Spencer scoured Hrdlička's correspondence, including a letter that he had written to Sir Arthur Keith asking about Piltdown. Keith was evasive and Spencer's suspicions were aroused by this, as well as by certain entries in Keith's diaries: these led Spencer to suspect that Keith had known more about the Piltdown forgery than he had ever admitted. Spencer's mind started revolving about the thought: did Keith not only know about the hoax but have a hand in it?

What had happened in 1912 was that parts of a calvaria and mandible had been recovered from a gravel pit on Piltdown Common, near Uckfield in East Sussex, England. Charles Dawson, a lawyer of Uckfield and active member of the Sussex Archaeological Society, had "found" them embedded in the reddish gravel. Along with them were some fossil animal bones and teeth and several very primitive-looking, supposed stone tools, all of the same reddish color as the gravel. The accompanying animal bones and tools were so archaic in character as to create the impression that the cranium and jaw were extremely old—older, it was inferred, than the Mousterian remains of France and even the Heidelberg jaw of Germany, up to then considered the oldest hominid from Europe. Dawson handed the Piltdown human-like remains, and some others from one or two sites close by, to Sir Arthur Smith-Woodward at the Natural History Museum, London. The latter reconstructed the skull of Piltdown I and presented the world with a supposedly new kind of ancestral hominid with a large braincase and an ape-like mandible. Of all the eminent scholars who accepted that the new find was the skull of the oldest hominid on earth (save for *Pithecanthropus erectus* of Java, Indonesia, later lumped with *Homo erectus*), none was more agog than Keith.

The fraud had been so cunningly devised that it passed muster for 40 years, although some scientists doubted whether the human calvaria and the apish jaw belonged to the same species, and a few, it seems, suspected that it had been deliberately contrived. By

the 1950s, the discoveries at the South Africa sites of Taung, Sterkfontein, and Kromdraai had cast serious doubts over the place of the Piltdown remains. Keith, who was the most avid advocate of Piltdown as the model for early human evolution, was also the most outspoken opponent of the South African australopithecine fossils and of the place in hominid phylogeny that R.A. Dart and R. Broom had claimed for them. Because the data from South Africa and those from Piltdown pointed to diametrically opposed patterns of human evolution, matters had reached a pretty how-d'ye-do by the early 1950s. Much hard thinking in London and Oxford led J.S. Weiner (who had done his first degree in Dart's department, the home of *Australopithecus africanus*) to come up with what he considered to be the only possible solution—a fraud had been committed!

Careful studies at the Natural History Museum in London and in the Human Anatomy Department at Oxford University revealed that all of the remains found at several sites in the Piltdown region, human, nonhuman, and cultural, had been doctored and seeded into the gravel beds. Further studies showed that the animal bones and tools, carefully stained and in some cases shaped, had been brought from elsewhere for planting in the Piltdown gravel. The calvaria proved to be that of a modern human and the mandible that of an orangutan.

The uncovering of the hoax came as a bombshell, because so many significant scholars had been taken in for so long. At the same time, it removed from the list of "hominid ancestors" a set of remains whose position had become untenable in the light of the African discoveries. Inevitably the question arose: who had perpetrated the hoax?

J.S. Weiner immediately published a case against Dawson, the "Johnny-on-the-spot" who had brought most of the planted objects to light. Many people were content to leave matters there. But for nearly another 40 years more questions were asked: did Dawson, who was not a professional physical anthropologist or archaeologist, have the knowledge needed to select the right pieces to be planted, and to modify them in such a

way that the hoax would be unlikely to be uncovered? Would Dawson have had access to such a range of genuine nonhominid mammalian fossils and primitive-looking tools from elsewhere? Where would he unaided have obtained the modern-looking though very thick human brain-case and an orangutan mandible whose commingling had created the Piltdown chimera? Surely, it was reasoned, he must have had a scientist collaborator with access to materials and knowledge.

Against this background, in the early 1980s, Spencer was worrying about the role of Keith: could he have been Dawson's co-conspirator? His sleuthing in Keith's diaries and other documents seemed to point in that direction. Then he heard about the work of Dr. Ian Langham in the Department of History at the University of Sydney, Australia. Langham was working on a biography of Keith and his fossicking through the Keith papers had brought him face-to-face with the events surrounding the Piltdown forgery. In 1984, Langham wrote telling me that the second part of his project, the link between Keith and Piltdown, "is the thing that is burning a hole in my brain at present, as I have amassed evidence relating to the [Piltdown] culpability question which is, I believe, an order of magnitude 'harder' and less circumstantial than anything that anyone else has managed to come up with so far. And before I bring the wrath of God down upon myself by publishing it, I would like to first check it out with the cognoscenti." Apparently placing me in that category, he came to see me on May 24, 1984. He laid his *prima facie* evidence before me in the course of a 7–8 hours' conversation on Piltdown and related matters. Langham divulged his theory that Keith had been the scientist-member of the two-man team of forgers he was postulating.

It struck me that, as far as I knew, this was the only one of all of the "Piltdown men" who had not so far been incriminated. The list of suspects was a long one. It included Teilhard de Chardin, W.R. Butterfield, Arthur Conan Doyle, S.A. Woodhead, W.J.L. Abbot, Grafton Elliot Smith, W.J. Sollas, Arthur Smith Woodward, Martin Hinton, and Frank Barlow—apart from Dawson.

Langham's evidence seemed compelling. I urged him to continue his researches and write up his work on original unpublished archival material in London. I had long been convinced that the acceptance of Piltdown by leading British figures in anthropology had played a major part in delaying the acceptance of Dart's (1925) claims for the Taung child, the type specimen of *Australopithecus africanus*. I invited Langham to present his results at an international symposium which was to take place early in 1985 on the sixtieth anniversary of the announcement of the discovery of the Taung child. On May 31, 1984, he replied, accepting the invitation and intimating that he would give a paper on "The history of hominid studies, with special reference to Piltdown and how it caused the African finds to be misinterpreted." Before his results were ready for publication and prior to his planned trip to South Africa, Langham died tragically—he took his life on July 29, 1984.

The subject of Taung and Piltdown did come up for discussion at the Taung Diamond Jubilee International Symposium early in 1985. I briefly discussed the historical relationship between Taung and the Piltdown forgery (Tobias, 1985, pp. 37–38), though I did not divulge Langham's inference as to the identity of the hoaxer. Inter alia, I said, "The exposure of the Piltdown remains as fraudulent dealt a final, fatal blow to the notion that the increase of absolute brain-size had been first in the field [during hominid phylogeny]. Piltdown had helped to delay the acceptance of Dart's claims for *Australopithecus*." At the same meeting, S.L. Washburn, delivering the Twenty-third Raymond A. Dart Lecture, commented, "... it is of interest to note that some of the strongest critics of Dart were advocates of the forgery known as *Eoanthropus* (Piltdown). If one believed that the large human braincase came first in evolution, then there was no place for Taung" (Washburn, 1985, p. 5).

Nearly a year after Langham's death I received letters from Mrs. Kathie Langham, and from Peter Cochrane and Tim Murray of the University of Sydney, asking my views on their possible choice of Frank Spencer to bring Langham's researches on the Piltdown

forgery to completion. Having known and admired Spencer's works and, especially, his 1979 study on Aleš Hrdlička, MD, 1869–1943, I had no hesitation in replying that Langham's Sydney colleagues could not have chosen a more reliable, conscientious, and scholarly person than Spencer to develop, write up, and publish Langham's incomplete work on the Piltdown forgery. They accepted my advice and invited Spencer to take on the task. Moreover, Mrs. Langham gave me permission to pass on to Spencer the correspondence that had passed between her husband and myself. Little did I know then that Spencer had meantime reached the same conclusion as Langham. His own researches on the life and work of Hrdlička had led him to become immersed in the documents related to Piltdown, housed in the Museum of Natural History, London, and in the Royal College of Surgeons, as well as the correspondence and diaries of Keith. During these researches, he had come independently to conclude that the scientist-accomplice of Dawson had been none other than Sir Arthur Keith.

Spencer accepted the Australian challenge. His subsequent work was based on the fruits of the labors of both Langham and himself. He marshaled a huge body of evidence in support of this hypothesis and added several motives for Keith's putative action. There emerged a remarkably comprehensive and insightful analysis of an episode in the history of palaeoanthropology, which many consider to be the most notorious scientific forgery of the twentieth century, and certainly one which took longest to uncover. The books which flowed from this work furnished insights into aspects of the scientific process, as exemplified by those who devoted a staggering amount of time, in the first half of this century, to the forlorn attempt to place Piltdown in the scheme of human evolution.

Two compendious volumes by Spencer appeared in 1990, published by the Natural History Museum, London, and the Oxford University Press. The first, *Piltdown: a Scientific Forgery*, is a riveting account, a closely-reasoned analysis, and a work of profound scholarship; it makes a very strong case that Keith was Dawson's collaborator.

The second, *The Piltdown Papers*, presents a comprehensive compilation, minutely catalogued and meticulously indexed, of all the relevant documents of which either Langham or Spencer, or both, had studied the originals. It is a kind of Truth Commission Report which makes it possible and easy for other scholars to examine the evidence for themselves and either corroborate the Langham-Spencer hypothesis, or reach other conclusions. Both works are incisive, wondrously satisfying, and eminently readable. Spencer leads us finally to the historically inevitable, namely that, as Geoffrey Chaucer wrote half a millennium ago, "Murder will out." In *Piltdown: A Scientific Forgery*, Spencer produced a penetrating study of the entire history of Piltdown. He analyzed the prevailing paradigm in the early part of the twentieth century and the discoveries and hypotheses, during the previous century, that had led up to that state of knowledge. Loren Eiseley (1956), reviewing Weiner's book (1955), *The Piltdown Forgery*, in which the case against Charles Dawson had been set out, had written, "It is . . . a pity that as part of the story something more of the general intellectual climate of the period might not have been analyzed." Spencer's book filled this lacuna. In skillfully limning this conceptual background, Spencer enabled us to see the events centered around Piltdown in historical and philosophical perspective. His searching account of the response to Piltdown reveals it as a case study in the sometimes subtle and often blatant interaction of personalities, motives and events, theories, facts and supposed facts, reputations and egos, enmities and fair-weather friendships, and simulations and dissimulations. He showed that a paradigm can be so powerful as to dictate the course of discovery, interpretation, and scientific history, and that it may, in the event, help to delay progress in a field of research. For that is precisely what Piltdown did: those like Keith, Elliot Smith, Smith Woodward, and Boswell who accepted Piltdown were unable to look with favor upon such African discoveries as the Kanam mandible or the Taung skull.

Langham's original lines of evidence and Spencer's confirmation of those, as well as

his own additional pointers, provided a list of six heads of argument for the prosecution. My own subsequent studies provided validations of four of these and added three new lines of evidence, making a total of nine pointers to Keith's guilt. As these have been set forth in detail elsewhere (Tobias, 1992a,b), it is not necessary to recapitulate them here. Evidence as to Keith's character was assembled by Spencer (1990a) and myself (Tobias, 1992b).

As regards motives, Spencer ascribed to Dawson an overweening desire for recognition and to become a Fellow of the Royal Society of London (FRS, the highest English scientific distinction). According to Spencer, two principal motives governed Keith's participation in the fraud: one was the materialization in the Piltdown hominoid remains of a particular concept of human evolution; the other was career advancement and ambition. After the appearance of Spencer's books, a few critics denied the validity of the second motive. So, with the help of Spencer, I reexamined the career status that Keith had reached by the time of the Piltdown hoax. Three marks of attainment to a pinnacle of achievement were still in the future: Keith's FRS came only in the spring of 1913, his candidature having been rejected twice before; his first major work on human evolution, *Antiquity of Man*, was not to appear until 1915; and his knighthood was attained only in 1921. By these three criteria, one must conclude that Keith had not reached the top of the tree when this elaborate hoax was conceived, planned, and prepared and when the Piltdown "remains" were planted. At that stage Keith still had much to which to aspire.

While Spencer's contributions to the solution of the Piltdown riddle will always remain as his chief claim to fame, it should not be forgotten that he contributed many other items to the literature of physical anthropology and, in his earlier phase, that of medical microbiology. Bridging these two fields were two books, *Introduction to Human and Molecular Biology* (1970) and *Aspects of Human Biology: Theory Relevant to Medical Laboratory Sciences* (1972). The direction of his major interests is abundantly clear from three works of which he was the author or

editor: *A History of American Physical Anthropology, 1930–1980* (1982); *Ecce Homo: An Annotated Bibliographic History of Physical Anthropology* (1986); and a massive *History of Physical Anthropology: An Encyclopedia* (1997), a two-volume work which is already serving as a standard text. Another memorable work, edited by Fred Smith and Spencer, is *The Origins of Modern Humans: A World Survey of the Fossil Evidence* (1984).

Spencer was keenly aware of the need for a textbook on the history of biological anthropology. To while away the hours of incapacity in the first half of 1999, as he waited for the chemotherapy to take effect, he started writing this work. He had completed the first chapter and had asked his wife to post it to his publisher on Tuesday, June 1; on Saturday night, May 29, his conditioned worsened, and on Sunday, May 30, he weakened dramatically and died in hospital some hours later. The textbook he had dreamed of and had started remains unfinished. How fitting a tribute it would be to Frank Spencer if a suitably qualified member of the community of anthropologists were to accept the challenge of completing this work, just as Spencer once did after the death of Langham!

A cardinal aspect of Spencer's life-work is that he made the history of anthropology palatable and instructive. He well knew that the history of a discipline cannot be viewed in a vacuum: it relates to the society, the political regime, mores, and prevailing philosophy. Only thus may it be fully understood and appreciated. His premature death has robbed the world of scholarship of a man of great enlightenment who was a puissant catalyst of interest in the history and philosophy of anthropological science.

Frank is survived by his devoted wife, Elena, of Queens, New York, and his mother, Doris, of Rochester, England—and by the many friends, colleagues, and students whom he inspired.

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